

GRADUATE PROGRAM BULLETIN



SCHOOL OF GRADUATE STUDIES

A community of scholars devoted to teaching, research and science

NORTH CAROLINA A&T STATE UNIVERSITY

The background is a complex collage of various images. At the top, there's a portrait of a person's face. To the right, there's a spiral pattern. Below the face, there's a large, light-colored rectangular area. To the left of this area, there's a purple and white pattern. At the bottom, there's a dark, abstract shape. The overall color palette is warm, with yellows, oranges, and browns.

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North Carolina A&T State University
Greensboro, North Carolina



An aerial view of North Carolina A&T State University and its proximity to the skyline of Greensboro, NC



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*I*t is indeed a pleasure for me to bring greetings to all prospective graduate students on behalf of the community of scholars at

The School of Graduate Studies, established by the North Carolina State Legislature in 1939, stands ready to facilitate your

As one of North Carolina's three major centers for higher education in engineering, the University offers Ph.D. programs in mechanical engineering, electrical engineering, and industrial and systems engineering. In those and other fields, basic and applied research is conducted by faculty in university centers of excellence, in interinstitutional relationships, and through significant involvement with several public and private agencies. An example of a very successful interinstitutional program is our joint Master of Social Work program, which is administered in conjunction with the University of North Carolina at Greensboro.

As prospective graduate students, you are about to make one of the most important choices of your

Greetings from the Graduate Dean



Dr. Thoyd Melton,
Graduate Dean

North Carolina Agricultural and Technical State University. The University, established in 1891, became a constituent institution of the University of North Carolina on July 1, 1972. North Carolina A&T State University is a public, comprehensive land-grant university committed to scholarly teaching, research and public service. University degree programs at the baccalaureate, master's and doctoral levels emphasize engineering, science, technology, literature and other selected areas.

admission into North Carolina A&T State University's graduate programs. We offer advanced study for qualified individuals who wish to improve their competency for careers in professions related to agriculture, humanities, education, science and technology. The School of Graduate Studies also provides a foundation of knowledge and techniques for those who wish to continue their education in doctoral programs at other institutions or at North Carolina A&T State University.

entire life: the selection of a graduate program and field of study. I often address potential graduate students about the graduate enterprise, and I believe one of the most important concepts for beginning graduate students is understanding just what is expected of them during their graduate studies. The expectations at the graduate level are nothing like those at the undergraduate level. The better a potential graduate student understands the degree of difference between graduate school and undergraduate studies, the easier the transition to graduate studies will be.

While an undergraduate, you mastered the fundamentals of your discipline and became a very effective "tool user." However, as a graduate student, the expectation is that you will progress to a

higher level. It is expected that you will make a scholarly contribution to your discipline, or in other words, become a "tool maker." It is the responsibility of the faculty, staff and administrators at North Carolina A&T State University to facilitate this transition.

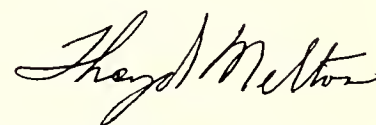
While studying at this university, it is expected that graduate students will: (1) acquire special competence in one or multiple fields of knowledge; (2) further develop their ability to think independently and constructively; (3) develop and demonstrate the ability to collect, organize, evaluate, create and report facts which will enable them to make a scholarly contribution to knowledge about their discipline; and (4) make new applications

and adaptation of existing knowledge, so as to contribute to their professions and humankind.

At North Carolina A&T State University, you will find the quality of our graduate programs to be excellent and the faculty superb. The School of Graduate Studies has a multicultural faculty and student body, and beckons students from all over the world. An equally diverse faculty mentors students. If you pursue your graduate studies at North Carolina A&T State University, you will join a university in the midst of an exciting transition that entails state-of-the-art research, both theoretical and applied; excellent teaching, and partnerships with industry and government. As we move into the new millennium and beyond, the University also will

continue to place emphasis on strengthening its programs in engineering, science, technology and the humanities.

Upon admission to graduate school, you will become part of a community of scholars devoted to teaching, research and service. Our hope is that you will become members of such a community here at North Carolina A&T State University — one that is equally dedicated to academic excellence, achievement and commitment. We welcome and look forward to your arrival! ■



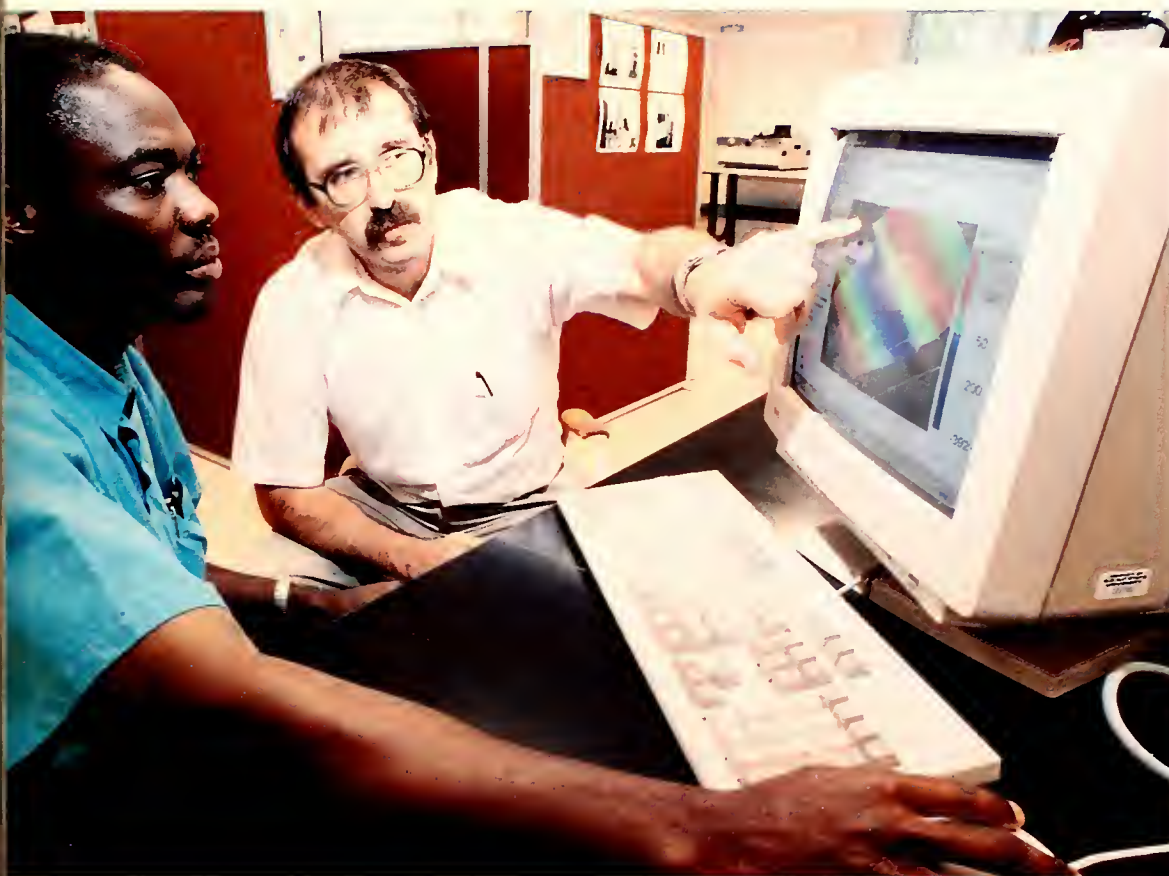
Dr. Thoyd Melton
Associate Vice Chancellor
and Dean of Graduate
Studies

The Mission of the School of Graduate Studies

*The Mission of the
School of Graduate Studies is to
foster excellence
in all facets of the graduate
enterprise at North Carolina
A&T State University, including
the admission of highly qualified
students, maintenance and
development of graduate
programs, enhancement of
graduate faculty and
development of the graduate
enterprise.*

1862 Morrill Act establishes the land grant universities.

The Graduate Experience- *Expectations*



The School of Graduate Studies is committed to:

- Efficient and effective administration of graduate programs at the university level
- Ensuring high standards for the graduate enterprise
- Helping University colleges, schools and departments recruit and retain excellent graduate students
- Helping to foster the development of interdisciplinary graduate programs
- Increasing the level of financial support for graduate students

1890

The Board of Trustees of the A. and M. College in Raleigh, now North Carolina State University, made temporary arrangements for Negro students so that the college could qualify for funds under the second Morrill Act.

the graduate process is often akin to moving down a winding river, with rock-strewn rapids and slow channels – muddy at times and clear at others. Forging the river's many fast-moving currents, snags and bends, and making it to the other side can be tedious and problematic. Can you imagine traveling down a river without a map, compass, necessary supplies, or without any idea of the specific character of the river? Yet, we often find that students entering graduate school have given little thought to what is expected of them from the graduate enterprise.

There are several essential transitions that you will have to make if your matriculation as a graduate student is to be successful. The most important transition, of course, is that from an undergraduate student to actually being a graduate student. To make this transition successfully, you must understand the distinguishing qualities of

A mentor, by definition, is...a trusted counselor or guide, tutor or coach



undergraduate and graduate education. A basic goal of undergraduate education is to make the student a good "tool user." Students at the undergraduate level should develop skills in the use of conceptual tools of their specific disciplines – skills that

have been developed and refined by others. This means that biology students, for example, should be acquainted with the modern tools of molecular biology – what they are, and how to use them. On the other hand, graduate education is concerned with the transition of students to "tool makers". Graduate students are expected to be able to hypothesize, develop strategies to test a hypothesis, and analyze data. They are expected to add tools to the knowledge base of their discipline, tools which will contribute additional observations and explanations as well as solve important problems. Students therefore must understand that this transition from a "tool user" to a "tool maker" is the essential metamorphosis for the successful completion of a graduate program.

Another major expectation is that students remain focused and balance course work and research during this transition, as they undergo graduate training. Engaging in research, classes, writing, and making presentations are just

a few of the demands that must be met as part of the graduate enterprise.

Finally, upon the completion of their graduate programs, graduate students must produce a scholarly work: the thesis, dissertation and/or publications. The student is transformed into an expert in his or her specific discipline.

One of the most unique aspects of the graduate experience is the apprenticeship alliance formed between the faculty adviser or mentor and the student. Members of the graduate faculty are skilled users of their disciplines' most advanced tools, and it is the faculty mentor's responsibility to guide the student's training during the graduate process. Effective faculty advisers will make sure that graduate students are oriented to the graduate culture and to laboratory protocols and procedures, are provided a time frame for expectations, scheduled to participate in weekly research meetings, and provided the opportunity for feedback.

Attributes of an effective graduate adviser

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Has compatible interests in subject matter and research.

Is accessible, enthusiastic, and willingly shares his or her time and advice.

Is engaged in active research.

Is someone you can respect and learn from.

Is efficient, reviews student work in a timely fashion.

Provides clear expectations, constructive feedback, wise counsel and direction.

Challenges students to think deeply about research issues.

Creates an atmosphere conducive to engaging ideas and encouraging students.

Acts as an advocate for the student.

Believes in the student's ability, nurtures the student's self-image as an emerging scholar in the field.

1891 North Carolina General Assembly ratified Morrill Act, establishing the "A. and M. College for the Colored Race."

1892 Professor John O. Crosby of Salisbury was elected the first president of the college on May 25.

Tools of the Trade

- **Know what is expected: if you need help or information, ask for it.**
- **Map out your plan of study and research plans early in the process.**
- **Be an active participant in seminars, colloquia, and other important department functions.**
- **Set up a schedule for accomplishing tasks and commit to it; be sure to include time for family, friends and other areas of your life.**
- **Approach your graduate program as a challenge, not as a chore.**

Graduate students must be aware of the time-to-degree issues for completion of work, such as establishing an advisory committee, choosing a faculty adviser, taking comprehensive examinations, submission deadlines for manuscripts and drafts of theses, setting dates for theses defenses, etc.

Unlike the undergraduate experience, the graduate experience is a much more active process, demanding input from the student at many levels. Graduate training requires that there be an open dialogue between the faculty adviser and the graduate student. Successful training of graduate students also demands strong mentoring, access to information, ability to network, strong advocates, and contact

with fellow students. Your active participation in the graduate process – and knowledge of what is expected during the transformation from “tool user” to an effective “tool maker” – are

your keys to successfully navigating the graduate enterprise, and all the expectations and responsibilities that come along with it. ■

Guides for Making the Grade A+

Making the Grade in Graduate School: Survival Strategy 101. Howard G. Adams, Ph.D., National Consortium for Graduate Degrees for Minorities in Engineering and Science, Inc. (GEM).

Getting What You Came For, the Smart Student's Guide to Earning a Master's or Ph.D. Robert L. Peters, Ph.D., The Noonday Press, 1997.

How to Complete and Survive a Doctoral Dissertation. David Sternberg, St. Martin's Press, 1981.

Dissertations and Theses From Start to Finish. John D. Cone and Sharon L. Foster, American Psychological Association, 1995.

1894

The Register, student newspaper, first published.

1896

Dr. James B. Dudley elected the college's second president.

1898

First degrees conferred by the college.

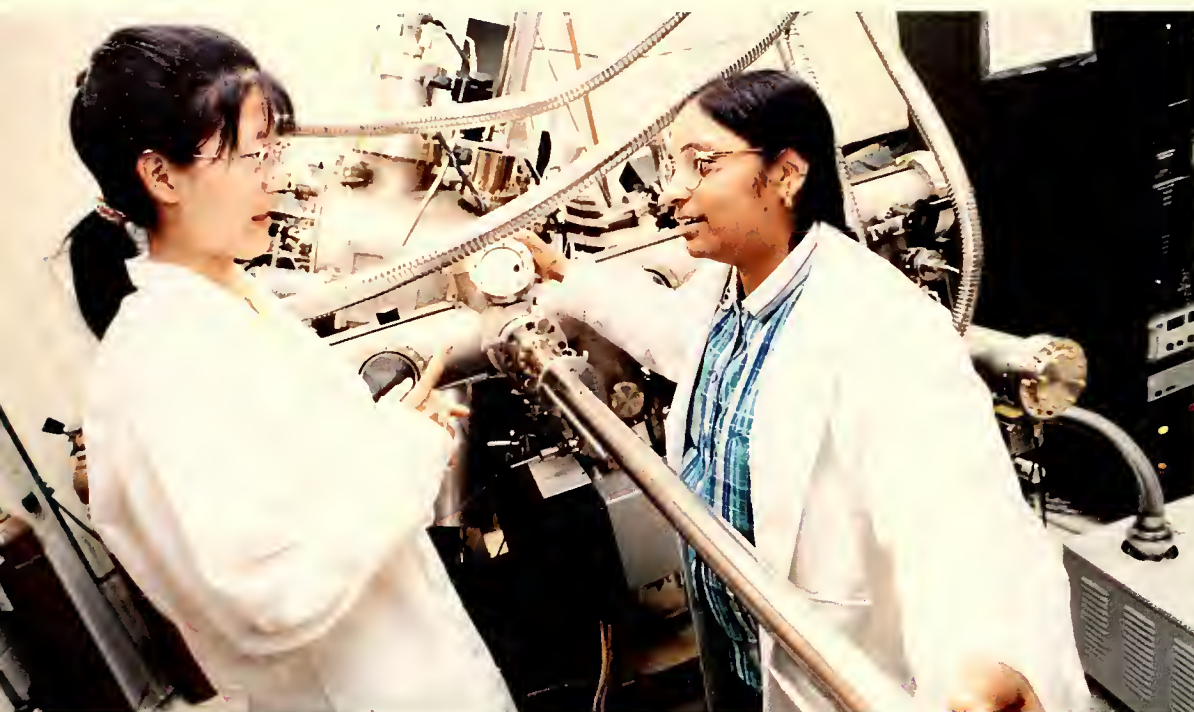
1915

Name of the college became the Negro Agricultural and Technical College of North Carolina.



Members of the class of 1900, with Dr. James B. Dudley (back row, far right)

Graduate Programs: An Overview



universities. The University's doctoral programs offer the Ph.D. degree in electrical engineering, mechanical engineering, and industrial and systems engineering. Since the inception of the University's graduate programs, more than 6,500 students have completed advanced degrees at A&T, and significant numbers of those students have moved on to pursue more advanced degrees at the most prestigious universities in the state, nation, and world. North Carolina A&T's membership in the Council of Graduate Schools – the largest national association organized specifically to advance graduate education in the United States and abroad – places it in the company of the finest institutions of higher education in the world. ■

The School of Graduate Studies at North Carolina Agricultural and Technical State University was established in 1939, offering advanced study in one discipline, agricultural education. Since its inception, the School of Graduate Studies has expanded to offer more than 41 areas of study, including: adult education, animal science, agricultural economics, biology, chemistry, computer science, electrical engineering, English, food and nutrition, industrial and systems engineering, mechanical engineering, natural resources and environmental design, physics, and social work. Fields of study that have produced a significant number of professionals in North Carolina and surrounding areas include agricultural education, instructional

technology, elementary education, counseling, industrial education, industrial technology and secondary education.

In more than 50 years of service to date, the School of Graduate Studies has offered the M.S. degree in most fields of study. However, the M.A. degree is offered in the specialized field of English – African-American Literature, and the University now offers the MSW degree in social work. A&T also has the only accredited agricultural and biosystems engineering program of its kind among the nation's historically black colleges and

1925

Dr. Ferdinand D. Bluford elected as third president of the college.

1926

National Alumni Association organized.

1939

A&T authorized to grant the Master of Science degree in education and certain other fields.



Program Highlights

Master's Programs



■ Agriculture

The University's diverse graduate programs in agriculture prepare students for careers ranging from administration to extension, teaching to research, and agricultural-related business to government service. Much of the University's agricultural research activity is sponsored by the U.S. Department of Agriculture, and is conducted on the University farm and in campus laboratories. Significant research areas include agricultural economics, animal science, plant science, landscape architecture and design, human nutrition, housing, food science, and animal health. The International Trade Center – an education, research and extension center of excellence within the School of Agriculture – helps small-scale businesses establish international trade, and focuses on agriculturally based businesses.

Available fields of study are:

- Agricultural Economics
- Agricultural Education
- Animal Health Science
- Food and Nutrition
- Plant and Soil Science

■ Arts and Sciences

The University offers a range of fully accredited master's degree programs designed to prepare students for doctoral study, or to broaden their base of knowledge for employment in business, industry or government. Each program provides ample opportunities for rich academic and research experiences.

Available fields of study are:

- Applied Mathematics
- Applied Physics
- Biology
- Chemistry
- English — African-American Literature
- Professional Physics



■ Education

The University's graduate offerings in education encompass a variety of programs, all designed to prepare students for a wide array of career opportunities in the public and private sectors, including elementary, post-secondary and higher education.

Available fields of study are:

- Adult Education
- Biology - Secondary Education
- Chemistry - Secondary Education
- Counselor Education
- Elementary Education
- English - Secondary Education
- Health and Physical Education
- History - Secondary Education
- Human Resources
(Agency Counseling and Business and Industry)
- Instructional Technology
- Mathematics - Secondary Education
- Reading Education (K-12)



■ Engineering

Master's degree programs in engineering prepare students for advanced professional practice or for further graduate studies, building on students' backgrounds in all phases of the engineering design process: conception, planning, synthesis, analysis, design and management. The master's program in computer science combines computer science fundamentals with practical knowledge and technical excellence in the most advanced technologies.

Available fields of study are:

- Agricultural and BioSystems Engineering
- Architectural Engineering
- Chemical Engineering
- Civil and Environmental Engineering
- Computer Science
- Electrical Engineering
- Industrial and Systems Engineering
- Mechanical Engineering

■ Technology

Graduate programs in technology emphasize areas including technical graphics, industrial technology, machine-tool systems, instrumentation, control computers, and automation. Program offerings prepare students for a wide range of careers, including education, printing/publishing, and positions in technology, management, and application engineering.

Available fields of study are:

- Industrial Technology
- Industrial Technology with telecommunications emphasis
- Technology Education
- Vocational Industrial Education
- Manufacturing Systems
- Graphic Communications



■ Interdisciplinary Studies

The University offers a joint Master of Social Work program with the University of North Carolina at Greensboro. As part of the program – which models multicultural collaboration – students and faculty teach and study at each campus, and have access to the full range of instructional and research support available at both universities. The program is built on a professional advanced generalist curriculum model, and is designed to provide students with a theoretical and applied education in social work that promotes an understanding and appreciation of cultural diversity.

Doctoral Programs



The University's Ph.D. programs in the fields of Electrical Engineering, Industrial and Systems Engineering, and Mechanical Engineering are designed to:

- foster research for the benefit of both the University and graduate students.
- enrich the undergraduate program as a result of student interaction with high-quality engineering faculty concerned with graduate study and research.
- provide a graduate-level engineering resource base to support engineering activities in local and regional industry and government.

- foster industrial development in the state and region.

Areas of specialization for the Ph.D. program in Electrical Engineering include: Communication and Signal Processing, Computer Engineering, Electronic and Optical Material Devices, and Power Systems and Control.

Areas of specialization for the Ph.D. program in Industrial and Systems Engineering include: Human-Machine Systems Engineering (HMSE), Management Systems Engineering (MSE), Production Systems Engineering (PSE), and Operations Research and Systems Analysis (ORSA).

Interinstitutional Opportunities

The Piedmont Independent College Association

The Piedmont Independent College Association of North Carolina is an organization comprised of North Carolina Agricultural and Technical State University, The University of North Carolina at Greensboro, High Point University, Greensboro College, Bennett College, Guilford College, and Guilford Technical Community College. The organization promotes interinstitutional cooperation and cooperative educational activities among the seven institutions. Any student enrolled in one of the organization's member institutions may enroll at another institution for a course or courses not offered on the student's home campus.

1941 Woodland E. Hall became first graduate to receive the Master of Science degree.

1953 The School of Nursing was created.

Research & Research Centers



1956

Dr. Warmoth T. Gibbs elected as the college's fourth president.

1959

A&T College accredited by the Southern Association of Colleges and Schools.

North Carolina A&T State University's leadership and excellence in research and development has earned the University a national reputation for innovation, scholarship and public service. Now ranked fourth among the UNC System's 16 universities in the production of sponsored research, A&T is ranked among the top five historically black colleges and universities in total federal obligations for research and development in science and engineering. The

University currently manages 279 active projects valued at nearly \$108 million.

A&T is the first and only historically black university in the country to receive a NASA-funded Mars Space Research Center, and has received more than \$25 million in NASA funding in the past seven years. The



University's \$9.5-million Fort Interdisciplinary Research Center, named for A&T Chancellor Emeritus Edward B. Fort in 1998, is the only interdisciplinary research center in North Carolina. A&T also is recognized as a leader in technology

North Carolina A&T is highly ranked among the top 100 degree-producing institutions in U.S. African-American Degrees Conferred

Baccalaureate NCA&T

Rank	
Engineering	1st
All Disciplines	3rd
Business	4th
Comp & Info Science	10th
Health Professions	11th
Biology	13th
Education	13th
English	17th
Communications	23rd
Physical Sciences	39th

Master's NCA&T Rank

Engineering	2nd
Comp & Info Science	3rd
Education	14th
All Disciplines	24th



Fort Interdisciplinary Research Center

education: the University has one of only two schools of technology in North Carolina and recently opened the new \$8-million Smith School of Technology building.

to establish a Science and Technology Center. The NSF Science and Technology Center for Environmentally Responsible Carbon Dioxide Processes is to be the leading

facility in the world dedicated to discovering environmentally friendly processes for industry. The NSF grant is the largest research grant ever received by the UNC System. ■

In July 1999, the University took yet another step into the forefront of internationally recognized research and development. A&T – with partner institutions UNC-Chapel Hill, NC State University and the University of Texas at Austin – was named a co-recipient of an \$18-million grant from the National Science Foundation



Samuel C. and Angeline D. Smith School of Technology Building



1960

Four freshmen students of A&T College – Ezell Blair, Jr. (now Jibreel Khazan), Franklin McCain, Joseph McNeil, and David Richmond – initiated the lunch counter sit-in demonstrations on February 1. Dr. Samuel D. Proctor was elected the college's fifth president.

Major Centers and Institutes

Center for Advanced Materials and Smart Structures

The Center is an educational and research resource for North Carolina and the nation in the field of advanced ceramic materials and their composites. It operates as a collaborative effort among academe, private industry and the government in developing basic and applied research programs focused on integrating research and education. Basic research in advanced ceramics, advanced composites, electronic ceramic devices, sensors and smart structures and III-V nitrides, ohmic contacts and devices drives the Center's activities.



A&T Composite Nozzle Technology Transfer Collaborative Team, with prototype rocket nozzle, developed by A&T and Atlantic Research Corporation

Center of Aerospace Research

The Center's primary mission is to conduct high-quality research in aeronautics and astronautics. It performs critical research to support the development of NASA's High Speed Civil Transport programs, and the improvement of the agency's Single and Two State to Orbit missions. Ongoing research efforts are designed to support NASA's exploration of space and long-term human

presence in space, as well as its investigations into enhancing life on Earth. The Center's core research themes are aerospace structures, controls and guidance; computational fluid dynamics, propulsion, and human-machine engineering. Center researchers are actively developing capabilities in space station design and management, and microgravity materials research.

Center for Autonomous Control Engineering

The Center conducts interdisciplinary research in programs for the application of: fuzzy logic-controlled power electronic building block systems in HVAC systems; nonlinear active control of dynamic systems; artificial potential field-based motion planning/navigation in two- and three-dimensional dynamic environments, and other relevant topics. Its areas of concentration are soft computing, multi-agent systems, general artificial intelligence, control theory, generic algorithms, and energy conservation and power electronics.

Center for Composite Materials Research

Research with polymeric-based composite materials began at the University in 1976, and the Center was established in 1988. Its major facilities are: the Computational Laboratory, Mechanical Testing Laboratory, Diagnostic Laboratory, and Composite Processing and Fabrication Laboratory. Research activities include:

- processing and fabrication of simple to complex composite components
- use of textile fiber architectures in the fabrication of non-trivial lightweight composite components
- testing and characterization of composite materials
- analysis of composite structural components
- development of innovative processing techniques with textile fabrics

Center for Electronics Manufacturing

The Center's goal is to strengthen the manufacturing, service and research arm of the electronics manufacturing industry in the areas of productivity, quality, and timeliness in delivering products and services. Specifically, the Center focuses on:

- the need to reduce time to service or market
- the need to access leading manufacturing technologies while reducing investments

1964

Dr. Lewis C. Dowdy elected as sixth president of the college.

- the need to focus on core competencies
- the need to improve inventory management and purchasing power

Center for Energy Research and Technology

The Center's mission is to enhance undergraduate and graduate education through energy-related research, and to transfer that new knowledge to regional and national industries. Its objective is to improve economic competitiveness while reducing the environmental impact that results from excessive energy consumption. The Center's research focuses on energy use and energy efficiency in buildings and industrial processes, as they relate to technological, economic, political and environmental issues.

Center for Environmental Remediation and Pollution Prevention

The Center's primary mission is to promote research in science and technology leading to new and improved remediation techniques, with the goal of addressing difficult environmental problems facing North Carolina and the nation. The Center also is designed to develop environmentally safe processes and new pollution prevention techniques.

Institute for Human-Machine Studies

The field of human-machine system engineering emphasizes how users interact with machines, how usable machines are to users, and the impact of machines on user performance. The Institute is a comprehensive multidisciplinary program of basic and applied scientific research and technology development, directed toward understanding the nature of human performance while interacting with complex, technology-driven systems. Its focuses are: cognitive engineering and human-system interface sciences, aviation and transportation human factors, information and



communication technology integration, and health care and manufacturing applications.

International Trade Center

Stimulating economic development and international trade is the Center's primary mission. Its educational activities are largely directed toward teaching students, providing research and related materials to small businesses, and providing technical assistance and information to the agricultural business community. Program emphases include:

- developing educational programs to enable farmers and processors to produce a broader range of products
- enhancing understanding of the linkages among national economies, world markets and agriculture
- conducting market-based research to understand factors that influence competitiveness
- developing programs in North Carolina's rural communities to enhance entrepreneurial skills, create jobs and diversify their economies

Rockwell Solid State Electronics Laboratory

The Laboratory provides a vertically-integrated laboratory environment for performing materials and device research, primarily in the area of compound semiconductors.

Transportation Institute

The Institute's mission is to coordinate and manage interdisciplinary research, training, and technology transfer activities involving faculty, staff and students from various departments within the University. It functions as a national and regional center for research and training, and as an information clearinghouse. The Institute's activities include: soliciting extramural funding, coordinating faculty development and student enrichment programs, facilitating technology

1967

Diamond Anniversary. A&T designated a Regional University – the North Carolina Agricultural and Technical State University.

1969

The School of Engineering accredited by the Engineers' Council for Professional Development.

A&T in the *News*

In September 1999, A&T received a pledge of \$3 million from the Ford Motor Company Fund to support key educational initiatives and student resource facilities. The funding, to be contributed to the University over a five-year period, represents the largest corporate gift ever received by A&T. The \$3 million contribution will support the University's Fitness and Wellness Center and 40 scholarships for students in various fields of study. The funds will also be used to equip laboratories in the College of Technology, to provide equipment for the Ford Automotive Engineering Lab, and to assist other campus programs.

- In October 1999, A&T received a \$2.1 million Title III Historically Black Colleges and Universities (HBCU) Grant from the U.S. Department of Education to develop and enhance academic programs and support systems.

- The National Science Foundation awarded \$2.4 million to NC State University and A&T in fall 1999 to fund the North Carolina Minority Graduate Education Partnership through August 2004.

- A&T is one of six historically minority universities selected to receive a 1999 NASA Partnership Award to conduct education and research projects with NASA's Marshall Space Flight Center in Huntsville, Alabama. The Partnership Awards are grants of up to \$100,000 for up to two years.

- Dr. Thoyd Melton, Associate Vice Chancellor and Graduate Dean, was named the 1999 William A. Hinton Research Training Award recipient. The Hinton award, presented by the American Society of Microbiology, honors an individual who has made significant contributions toward fostering the research training of underrepresented minorities in microbiology

- In 1994, the A&T Space Shuttle Program sent two research projects into space aboard the space shuttle Endeavor

transfer, providing technical assistance and public service, and coordinating other transportation-related programs.

Waste Management Institute

The Institute is an interdisciplinary program designed to enhance awareness and understanding of waste management

problems in our society, and to enhance

instruction, research and outreach aimed

at improving the quality of life and

protecting the environment. The

Institute's goals are to increase the

number of professionals in

environmental and waste management,

enhance interdisciplinary research, increase

public awareness, and facilitate cooperative and exchange

programs among students, faculty, government and industry.



1970 The School of Business and Economics was created by Trustee Board Action.

1971 The School of Nursing was accredited by the National League for Nursing.

1972 A&T became a constituent institution of The University of North Carolina.

Excellence in teaching



Dr. Nancy Glenz, instructing students in the School of Technology, is among North Carolina A&T's many distinguished and dedicated faculty.

1978

The Graduate School was approved as a member of the national Council of Graduate Schools.

1979

Dr. Ronald E. McNair, 1971 A&T graduate, was selected for the U.S. astronaut program.

The North Carolina A&T faculty's enthusiastic interest in teaching and in the intellectual development of students is a key factor in the high quality of instruction at the University, playing a significant role in the University's intellectual vitality and its production of outstanding students. An important measure of the standard of excellence set by A&T faculty, then, is the caliber — and achievements — of the University's students and alumni.

In 1998, A&T was ranked the nation's No. 1 producer of minorities with degrees in science, mathematics, engineering and technology. A&T also is one of the largest producers of certified public accountants among HBCUs, and has the first nationally accredited accounting program in the country among such universities.

The University's faculty distinguish themselves locally, regionally, nationally and internationally through their scholarship, research, impressive records of publication, and public service. More than ninety-five

percent of full-time, tenured A&T faculty have doctorate degrees, furthering the University's goal of stimulating academic growth for students and the overall intellectual climate at A&T.

A&T's active and dedicated scholars travel around the world to present their work and engage in research. They are recognized by their peers and by prestigious national and international organizations, academies and societies for their contributions to their fields of inquiry. ■

A

mong North Carolina A&T's many distinguished scholars, two faculty members have received the UNC Board of Governors' Award for Excellence in Teaching in the 1990s, thus distinguishing themselves as University Distinguished Teachers:

Dr. Kofi Obeng of the School of Business was named UPS Distinguished Professor of Transportation in 1995.

Dr. Nancy Glenz, associate professor, School of Technology, was honored as a University Distinguished Teacher in 1997.

In 1999, **Dr. Kenneth Roberts**, assistant professor in the College of Engineering, was one of four UNC System professors to receive the Outstanding Faculty Mentor Award from the National Science Foundation Alliances for Minority Participation /North Carolina.

A Cutting-Edge Learning Environment

North Carolina A&T has more than 100 years of experience opening doors for students who might otherwise have been closed out. With that rich history, it is only fitting that the University is among the vanguard of the nation's institutions of higher learning in using the Internet and distance education to advance the pursuit of graduate and undergraduate education.

University faculty use cutting-edge technology in the classroom in myriad ways and forms. Faculty instructional technology resources include:

- **A multifunctional electronic meeting room** established by A&T and the Department of the Army Research Lab, and used for faculty and staff training sessions and electronic meetings. Group Systems, an electronic meeting software tool, is a related resource which supports group processes such as brainstorming, list

creation and consensus building. The Group Systems software is designed to be used interactively by a group of people working at separate work stations.

Electronic meetings and associated technologies have proven to be effective resources for research proposal development, research collaboration, and enhancing classroom activities, such as student presentations, thesis and project reviews, and lecture feedback and questions.

- **Web-enhanced courses** Growing numbers of faculty members are using the Web as a resource for supplementary classroom materials, including

course syllabi, homework assignments and other electronic resources.

- **Resources to aid student learning**

Among these are CBT Systems, online tutorials available to support students with learning basic software applications, and CyberExam, a Web-based testing and assessment tool. Students also have access to state-of-the-art computer labs, and new classrooms are being designed with connectivity available to support laptop computers.

- **Videoconferencing**

The University's teleconference team supports the teaching and learning process by connecting

students, faculty, and researchers with various videoconferencing tools.

- **Symposium — Audio conferencing/collaboration via the Internet**

This tool enables faculty to create virtual learning communities, and supports services for students such as virtual office hours, research assistance, and follow-up tutorials for special topics. ■



A Tradition of Excellence

North Carolina A&T is proud of its 35,000-plus notable alumni, many of whom occupy leadership positions across the world. Among them are:

Dr. Ronald E. McNair, physicist and late U.S. astronaut. Received Ph.D. from MIT, 1976.

Dr. Joe Dudley, business owner and CEO, Dudley Products, Inc., Greensboro, North Carolina

Rev. Jesse Jackson, Sr., former candidate for President of the United States

North Carolina State Representative **Alma Adams**

Retired U.S. Army Major General **Charles D. Bussey**

Ralph K. Shelton, business owner and former Chairman of the Greensboro Area Chamber of Commerce

U.S. Army Brigadier General **Clara Adams-Ender**, first female commander, Fort Belvoir, Virginia

Henry E. Frye, North Carolina Chief Supreme Court Justice



Henry E. Frye, a 1953 A&T graduate, was sworn in as North Carolina's first African-American Chief Supreme Court Justice in September 1999.

Edolphus Towns, U.S. Congressman representing New York

1980

The University became an affiliate of the N.C. Microelectronics Center.

Dr. Cleon Thompson named as interim chancellor of the University on November 1

1982

Dr. Edward B. Fort inaugurated as the eighth chancellor of A&T State University.

Now in its second century, North Carolina A&T continues to build upon its tradition of producing graduates who stand ready to make significant contributions to the worlds of business and industry, government and public service, academia and research. A&T alumni are highly sought: The University's 1999 Career Awareness Program attracted more than 200 representatives from Fortune 500 companies, federal and state agencies, and other employers, as well as recruiters from some of the nation's most noted graduate schools. Among the corporations, agencies and universities represented were:

- *3M
- *Arthur Andersen LLP
- *Bechtel Corporation
- *Central Intelligence Agency
- *Dell Computer Corp.
- *Dow Chemical
- *DuPont
- *Eastman Kodak
- *Eli Lilly and Company
- *Ford Motor Company
- *General Electric Co.

- *Glaxo Wellcome Inc.
- *Hallmark Cards, Inc.
- *Hewlett Packard
- *IBM
- *Lockheed Martin
- *Motorola
- *Nortel Networks
- *Parke-Davis
- *Procter & Gamble
- *SAS Institute Inc.
- *The Boeing Company

- *U.S. Environmental Protection Agency
- *Union Carbide
- *Cornell University
- *Duke University
- *Purdue University
- *Rensselaer Polytechnic Institute
- *UNC-Chapel Hill
- *University of Illinois at Urbana-Champaign
- *University of Maryland
- *University of Michigan

Academic Resources



Ferdinand Douglass Bluford Library

The new University Library, occupied in June 1991, retains the name of the old Bluford library named for the third President of the institution. The four-level building contains 153,428 square feet and ultimately will house more than 600,000 volumes.

Current holdings include more than 450,000 bound volumes and 3,988 serial subscriptions. Additionally, as a select depository in North Carolina for United States government documents, the library contains a collection of over 253,000 official

government publications. Other holdings include a superior collection in videotapes, microfilms and other audiovisuals. The library maintains special collections in Archives and Black Studies, and a Chemistry Collection, located in the Chemistry Department in Hines Hall on the campus.

Special services are provided through a formal and informal library use instructional program, computerized literature searching, document delivery, interlibrary loans, and public access photocopiers. During the academic year, the library is

open 106 hours each week. Variations in this schedule are posted at the front entrance of the library. For hours of operation or more information, visit the library's Web site at www.library.ncat.edu/info/.

Learning Resources Center

The Learning Resources Center, located on the lower level of the Bluford Library, provides a wide variety of resources designed to support the instructional program, the methods practicum courses and the children's and young adult literature courses offered in the School of Education. Open seven days a week, the LRC



Dr. Ronald E. McNair

1984

Dr. Ronald McNair, A&T graduate, circled the earth in the space shuttle Challenger.

provides assistance and instruction in the use of learning and informational resources that support all University programs. The following subject areas are included: language arts, foreign language, literature, agriculture, business, music, sciences, health, mathematics, reading, social studies, technology, computer education, vocational education, and basic reference materials. For hours of operation or more information, call (336) 334-7753.

Center for Student Success

The Center for Student Success provides tutorial

assistance, group or individual counseling, audio- and computer-assisted instruction, and an environment that promotes intensive study to aid students in improving their reading, writing and computational skills. The Center, located in 312 Hodgin Hall, is open to all enrolled students. Telephone: (336) 334-7855 or 7838.

Educational Support Centers

The University's educational support centers include: an Audiovisual Center, the Closed Circuit Television Facility; WNAA, a student-operated educational radio station, the Reading Center, Language Laboratory, and the

Center for Manpower Research and Training.

Division of Research

The Division of Research was established to promote research at the University by encouraging and assisting faculty in developing proposals for research projects and educational programs. The office operates a grantsmanship library, which houses the most up-to-date directories, program brochures, guidelines, manuals, application forms, and other materials useful in seeking funds for projects.



Center for Student Success



Information Technology Center

Through the University's Computing and Information Technology division (CIT), computing facilities are available to University faculty, staff, and students for the development of curriculum programs, administrative systems, assistance in research, and tutorial services.

CIT provides numerous services including: administration data processing of student, personnel, and facilities data, which entails system design, system development, system implementation, and support of academic instruction and research computing for the educational community; and implementation of educational software systems.

CIT maintains an application system library with the necessary documentation of all available software packages and computer instructional material available to faculty and students. Available to the University community are ten computer laboratories equipped with online terminal devices and microcomputers providing instant response to the users in program

development. Hard copy and printers also are available.

Consultation services are available upon request through CIT, as well as Network support.

For more information, visit the University's Computing and Information Technology Web site at <http://www.ncat.edu/~cit/>

1986

A&T received a grant of \$2.25 million from the U.S. Office of Naval Research for composite materials research.

1987

The School of Technology was established.





The Graduate Admission Process

Applying for Admission to the School of Graduate Studies

Prospective students may apply to the School of Graduate Studies at any time during the year. To assure prompt action, however, the application must be received at least one month before the student plans to matriculate.

Application Deadlines
Fall - July 1
Spring - November 1
Summer - April 1

Students applying for the doctoral programs in electrical engineering, industrial and systems engineering, and mechanical engineering must submit their applications for the fall semester by April 15 and for the spring semester by October 15. Early application is encouraged, particularly if one wishes to be considered for an assistantship.

1988

The University was funded by NASA to operate a Mars Mission Research Project, and to establish and operate a \$3.6 million Space Technology Development and Utilization Program.

Admission to Master's Degree Programs

Applicants to master's degree programs must have earned a bachelor's degree from a four-year college. Application forms must be submitted to the School of Graduate Studies Office with two official transcripts of previous undergraduate and graduate studies.

Applicants may be admitted to graduate studies unconditionally, provisionally, or as special students. Applicants are admitted without discrimination based upon race, color, creed, or gender.

Unconditional Admission

To qualify for unconditional admission to a master's degree program for graduate study, an applicant must have earned an overall average of 2.6 on a 4 point system (or 1.6 on a 3 point system) in his or her undergraduate studies. Some programs require a 3.0 grade point average on a 4.0 scale; therefore, applicants should check appropriate sections of the Graduate Catalog for the minimum grade point average required. For more information about unconditional admission requirements, see the Graduate Catalog, or visit the Graduate School Web site at <http://www.ncat.edu/~gradsch>

Admission to Doctoral Programs

Applicants to doctoral programs in electrical engineering, industrial and systems engineering, and mechanical engineering must submit completed application forms with two official transcripts of previous undergraduate and graduate studies. Other admission criteria are outlined in the Graduate Catalog and on the Graduate School Web site.

Provisional or Special Status

An applicant may be admitted to a master's degree program for graduate study on a provisional basis, or to take courses as a non-degree seeking student. For more information, see the Graduate Catalog, or check out the Web: <http://www.ncat.edu/~gradsch>

1989

A&T received \$2.5 million from the National Science Foundation to conduct telecommunication research.

Preparing the Admissions Packet

A How-To Guide for Preparing a Competitive Application

✓ The Application Form

1. Type your application.
2. Statement of Goals and Objectives always must be typed.
3. Answer all questions. Ethnicity questions, however, are usually optional and generally requested for reporting purposes.
4. Do not disregard the application fee — your application will not be considered complete without it. Complete applications include a complete application form, two official transcripts of all prior academic work, three letters of recommendation or reference forms, appropriate standardized test scores, a statement of residence, and the non-refundable application fee of \$35. Application forms may be obtained from the School of Graduate Studies, 122 Gibbs Hall, North Carolina A&T State University, Greensboro, NC 27411 or downloaded from the Web at: www.ncat.edu/~gradsch/Application.html.
5. Official transcripts are required. Submit transcripts of all schools attended since high school. International students: Official transcripts and certified English translation (when not in English) are required. If the degree received is not listed on the transcript, send certified copies of diplomas or degree certificates in addition to transcripts.

✓ Statement of Goals and Objectives/ Personal Statement

1. Read questions and respond appropriately.
2. *Do not* try to write a generic personal statement – the one-statement-fits-all-institutions type. Schools may be looking for different things.
3. Be specific about goals and academic interests; explain why you have applied to a specific program.
4. Show that you know school and program strengths – make specific references.
5. *Do not* use word-processed statements in which you forget to change key variables, or photocopied, generic statements.
6. *Do not* forget to check for spelling and grammar.
7. *Do not* be obsessively defensive about your shortcomings.
8. *Do not* include your life history.
9. *Do not* write more than is necessary to fully answer the question. Schools usually want 1-3 pages.
10. Ask others to review your statement before mailing the application. Remember that schools are reviewing your writing and grammatical skills.

STANDARDIZED TESTING TIPS

GRE

- The GRE includes a General Test, required by some departments, and a Subject Test, which may not be required. Check with departments for specific requirements.
- Registration forms and information about the registration process can be found in the GRE Information and Registration Bulletin, available in the School of Graduate Studies Office, or by contacting: GRE-ETS, P.O. Box 6000, Princeton, NJ 08541-6000. Telephone: (609) 771-7670. Web site: <http://www.gre.org>.

- Computer-Based Testing for the General Test is offered year-round at locations across the nation, and provides immediate knowledge of scores. Students should plan to take the GRE at least one semester before applying to graduate school.

TOEFL

- International applicants who are graduates of institutions of higher education located in non-English speaking countries are required to take the TOEFL, designed to evaluate the English proficiency of non-native speakers.
- The computer-based test is given in individual testing stations containing computers and headphones. Registration forms and information about the registration process can be found in the TOEFL Computer-Based Testing Booklet, available in the School of Graduate Studies Office, or by contacting: TOEFL Services, Educational Testing Services, P.O. Box 6151, Princeton, NJ 08541-6151 USA. Telephone: 1-609-771-7100. E-Mail: toefl@ets.org. Web site: <http://www.ets.org>.

✓ Letters of Recommendation

When to ask:

Request letters early, so that your recommenders will have time to focus on you and your strengths.

Keep in mind that they will be writing letters for many students.

Whom to ask:

Choose your recommenders carefully: Ask professors or colleagues who know you and/or your academic work well, and can make insightful comments. Your goal is to get **STRONG** letters of recommendations.

Definition of a “good” letter

Always remember that your application is being reviewed by academics who are trying to determine your ability to successfully complete graduate study. Therefore, letters from faculty who can evaluate your ability to complete graduate study, based on your previous academic performance, are best.

How to ask:

Make an appointment when possible to discuss your goals and school selection with recommenders. Your letters of recommendation are to supplement and enhance your application: the more specific your recommenders can be about you and your academic qualifications, the better they are able to write strong letters of recommendation. Provide a copy of your statement of purpose, transcript, and resume, along with recommendation forms and stamped, addressed envelopes.

Waiving your right to see the letters:

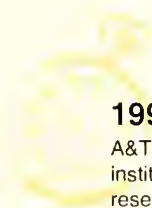
Be aware of confidentiality policies. Some institutions require that you waive your right to see letters of recommendation.

Follow-up:

Follow up! Do not assume that the institution has your letters of recommendation. Send your recommenders a thank-you card and let them know the results of your application process.

✓ Interviews

1. Find out if an interview is required.
2. Prepare in advance by researching the school and the department.
3. Review the research interests of faculty with whom you wish to work.
4. Carefully think through your goals and career objectives.
5. Be prepared to ask questions.



1990

A&T selected as the lead institution in a \$5.5 million research contract from NASA.

10 Golden Rules for Graduate Applications

- Apply! Apply! Apply!
- Contact graduate coordinators for specific information on graduate programs.
- Read the application packet carefully.
 - Make a checklist.
 - Set a timeline.
- Understand the evaluation process.
- Talk to students presently in graduate school.
- Have someone check over the application.
 - Type the application.
- Mail your application early.

Financing Graduate Education

1991

Dedication of the F.D. Bluford Library. A&T celebrated its Centennial Year.

Tuition and fees, room and board, books, supplies, transportation, personal expenses – all must be financed by the graduate student's budget. It comes as no surprise, then, that most students need help in meeting the numerous costs of graduate education. Sources of support for graduate study include state and federal government, private foundations, individual universities and faculty members, and research grants. Types of support available include grants, fellowships and scholarships, loans and work-study programs. Grants, fellowships and scholarships may provide the cost of tuition and fees, plus a stipend to cover living expenses. Other forms of aid, such as the federal work-study program, require students to

provide some type of service while enrolled in a graduate program. Loans generally are based on an assessment of need and must be repaid.

Eligibility Requirements

Institutional grants and scholarships typically are awarded to full-time students. Full-time enrollment is defined as 9 credits for graduate students; graduate students must carry more than four credit hours in graduate-level courses in order to receive a loan. Graduate students who are taking undergraduate courses are ineligible for a loan.

Eligibility for federal aid is based on financial need, as determined by the Free Application for Federal Student Aid (FAFSA). In

order to receive funds administered by the Office of Student Financial Aid at North Carolina A&T, you must meet certain enrollment, citizenship and financial need guidelines.

For more information, visit the federal Financial Aid for Students' home page at <http://www.ed.gov/offices/OSFAP/Students/> or call the toll-free help line at 1-800-433-3243.

Financial Assistance at North Carolina A&T

University financial assistance generally is awarded on a competitive basis, and includes: graduate assistantships, research assistantships, teaching assistantships and minority presence scholarships. Stipends or award amounts

WOODLAND ELLROY HALL ASSISTANTSHIPS

The Hall Assistantships are designed to facilitate the recruitment of highly qualified graduate students to master's and doctoral programs at North Carolina A&T. The Hall Assistantship program provides stipends of up to \$5,000 for master's students and up to \$10,000 for Ph.D. students for the academic year.

Students nominated for the assistantships must be U.S. citizens enrolled full-time as new students pursuing master's or doctoral degrees at A&T, and must be in good academic standing (3.3 GPA or better, with acceptable GRE scores) to be eligible, and must be registered in each semester in which the appointment is in effect. A letter of nomination from the department chairperson and a completed Assistantship Nomination Form must be sent to the Dean of Graduate Studies. Selection criteria include the student's academic record, creativity, educational and economic background, educational interests, exceptional personal talents, and unique work or service experience.

vary with the type of assistance. Graduate assistantships can range from \$2,000 to \$10,000 a year. Research assistantships may be awarded in amounts beyond that range, and some special fellowships award as much as \$15,000 per year.

Tuition Assistance

Full Payment of In-State Tuition (Tuition Award)

The resident tuition award offers full tuition support for in-state graduate students serving as University-supported graduate assistants or fellows. This award applies only to tuition, not fees, and is based on the number of hours a student is enrolled during the semester in which the award is given. All students must pay required fees unless the source of the stipend provides funds specifically earmarked to pay the student's fees, and all students selected must receive a minimum of \$1,000 in departmental support per semester. The in-state tuition remission award is available for the fall and spring semesters only; summer sessions are not covered. Recipients may be eligible for renewal awards by

FINANCIAL ASSISTANCE BASICS

- Grants, such as the Federal Pell Grant, Federal SEOG, or the North Carolina State Tuition Grant, are free assistance that do not need to be repaid.
- Federal Work-Study gives you an opportunity to work and earn money for school. Students work no more than 10-15 hours per week and are paid monthly.
- Loans, such as the federal Stafford loans, are low-interest and must be repaid after you complete school.

maintaining an overall GPA of 3.0 or above.

Extent of Support

- For Master's Students – 4 Semesters
- For Doctoral Students – 6 Semesters

Full Payment of Out-of-State Tuition (Tuition Remission)

Eligible out-of-state students may receive a tuition remission award that reduces their tuition to the in-state tuition. Additionally, out-of-state students may receive funding to cover the in-state portion of their tuition as well. These two funding sources, used in combination, provide full tuition for graduate students serving as University-supported graduate

assistants. This award applies only to tuition, not fees. All students selected must receive a minimum of \$2,000 in departmental support. Non-resident students must receive an out-of-state tuition remission to be eligible for, and to retain tuition remission for an in-state award. As with in-state tuition remission awards, the out-of-state tuition remission award is available for the fall and spring semesters only; summer sessions are not covered. Recipients may be eligible for renewal awards by maintaining an overall GPA of 3.0 or above.

Extent of Support

- For Master's Students – 4 Semesters
- For Doctoral Students – 6 Semesters

Loans, fellowships, assistantships, and other awards

Graduate students may apply for loans, such as federal subsidized and unsubsidized Stafford loans. Qualified graduate students pursuing master's or doctoral degrees also may apply for fellowships, assistantships and other

awards offered through individual University departments and the School of Graduate Studies.

Additionally, qualified students are encouraged to seek out and apply for national and regional fellowships, scholarships, and other aid – major sources of

North Carolina A&T Graduate Assistantship Guidelines

Types

Graduate Administrative Assistant (GAA)
Graduate Research Assistant (GRA)
Graduate Teaching Assistant (GTA)

Eligibility

All graduate assistants must be fully admitted to a graduate program, devoting full-time study toward a degree. To be considered for an assistantship, a student must not hold non-degree, special or probationary status at the University. Additionally, candidates for graduate assistantships must:

- register for a specific number of hours during the academic year, as prescribed by their academic departments
- maintain a 3.0 GPA
- satisfy other requirements specified by the employing department
- sign a Personal Service Agreement or contract as a condition of employment

1992

Authorization gained for Ph.D. program planning in Electrical and Mechanical Engineering. A&T designated as an \$8 million NASA Center of Excellence.

Fellowship Opportunities

Ford Foundation Predoctoral Fellowships for Minorities:

Available to U.S. citizens who are members of selected minority groups; intended for students who plan to work toward the Ph.D. degree, and who are at or near the beginning of graduate study.

Application deadline: early Nov.

Contact: Ford Foundation Doctoral Fellowships, The Fellowship Office, National Research Council, 2101 Constitution Ave., Washington, DC 20418.

Telephone: 202-334-2872

Web site: <http://fellowships.nas.edu>

Graduate Education for Minorities (GEM) Ph.D. Program in Science:

Awards fellowships for graduate study in science or engineering at participating institutions.

Application deadline: Dec. 1.

Contact: GEM Ph.D. Science Program, Box 537, Notre Dame, Indiana 46556. Telephone: 219-631-7771

e-mail: gem.1@nd.edu; Web site: <http://www.nd.edu/~gem>.

National Science Foundation (NSF)

Graduate Fellowships and Minority Graduate Fellowships:

Available to college seniors, first-year graduate students and others at or near the beginning of graduate study.

Application deadlines: Nov./Dec.

Contact: NSF/GRFP, Oak Ridge Associated Universities, P.O. Box 3010, Oak Ridge, TN 37831-3010.

E-mail: nsfgrfp@orau.gov; telephone: 423-241-4300

Web site: <http://www.fastlane.nsf.gov>

National Physical Science Consortium Fellowships Program for Minorities and Women:

Awards fellowships for graduate study at a participating NPSC institution.

Application deadline: Nov. 5.

Contact: NPSC; c/o New Mexico State University; O'Loughlin House; University Avenue, Box 30001; Dept. 3 NPS, Las Cruces, NM 88003-8001. Telephone: 800-952-4118

Web site: <http://www.nmsu.edu/~npssc>.

National Defense Science and Engineering Graduate Fellowship Program (NDSEG) of the Department of Defense:

Applicants must be U.S. citizens or nationals, at or near the beginning of graduate study for doctoral degrees in science or engineering.

Application deadline: Jan.

Contact: Dr. George Outterson, NDSEG Fellowship Program, 200 Park Drive, Suite 211, P.O. Box 13444, Research Triangle Park, NC 27709-3444. Telephone: 919-549-8505

E-mail: ndseg@aro-emhl.army.mil

Web site: <http://www.battelle.org/ndseg>.

- When completed, mail the application in the enclosed addressed envelope provided by the Federal Student Aid Programs.

- You must use your and/or your parents' annual tax information (i.e., 1998 tax information for a 1999-2000 application).

- You may submit the FAFSA on the Web — www.fafsa.ed.gov — or mail the form to the processor. If you fill out the online FAFSA, you must complete and mail the signature page to the processor.

- The University will receive the FAFSA electronically, provided that the North Carolina A&T State University school code (002905) is listed in Section G.

- The University's priority deadline is March 15. However, students who miss this deadline are still encouraged to submit the FAFSA by mail or online.

- Help in completing the FAFSA is only a click away. Go online to: www.ed.gov/prog_info/SFA/FAFSA

outside funding that provide generous support for graduate study. See the Fellowship Opportunities box on page 31 for ideas on where to start.

Students applying for loans or federal work-study through the Student Financial Aid Office should understand that fellowships, grants and out-of-state tuition waivers are considered financial aid, and that receiving them may affect eligibility for other aid. For more information about graduate aid, contact the School of Graduate Studies or specific departments. ■

The Application Review Process

The application and all supporting documentation should be sent to the School of Graduate Studies.

Completed applications are forwarded to appropriate departments for review and recommendation.

Departments make recommendations to the Dean of Graduate Studies concerning admission status.

The School of Graduate Studies Office finalizes the admissions process.

OTHER SOURCES OF INFORMATION ON FINANCING GRADUATE EDUCATION:

- Books on fellowships
- Computer databases, such as:
[www.ed.gov/prog_info/SFA/Student Guide](http://www.ed.gov/prog_info/SFA/Student%20Guide)
(U.S. Dept. of Education Financial Aid Student Guide, 1999-2000)
www.ed.gov/offices/OPE/express.html
(FAFSA Express)
- Graduate School recruiters, recruiting fairs and forums
- Academic advisers
- Departments to which you are applying
- Financial Aid Office and Research Support Offices

1993

A&T authorized to offer Ph.D. degrees in Electrical and Mechanical Engineering.

1994

A&T enrolled its first Ph.D. students in Electrical and Mechanical Engineering. A&T's Student Space Shuttle Program sent two research projects into space aboard the space shuttle Endeavor.

Answers to Frequently Asked Questions about A&T Admissions

Q. Can I apply to more than one department?

A. The University does not offer dual majors. However, you may choose to list one department as your first choice for admission, and a second department as your second choice. If you are not accepted for admission to the department you selected as your first choice, your application will be forwarded to the second department.

Q. Can I apply for either spring or fall admission?

A. Yes. Application deadlines are July 1 for fall admission and November 1 for spring admission.

Q. What if I want to start in the summer?

A. You may begin graduate study at the University in the summer if accepted for admission before the first summer session begins. If not, you may apply to summer school; your department then will decide if summer credit may be applied to your graduate program.

Q. I may have some documents sent to North Carolina A&T State University before I submit my application. What will happen to them?

A. Any documents submitted before your application is received will be filed in a pending file for one year until your application arrives.

Q. If I do not have all the documents ready at the same time, can I send them separately?

A. We strongly encourage you to submit all documents at the same time to ensure the timely processing of your application.

Q. Do my application and all supporting credentials have to be in by the deadline date or can they be postmarked by that date?

A. The application and supporting materials must be received in the School of Graduate Studies Office by the deadline date.

Q. If I am admitted and cannot attend, can I enroll at a later date?

A. Yes. You may defer your enrollment at the University by submitting your request for deferral in writing to the School of Graduate Studies. Your letter must indicate the semester you plan to enroll.

Q. If I am not admitted, can I be reconsidered for another term?

A. If you are not admitted, you must submit additional information in support of your application in order for it to be re-evaluated. That information may include transcripts indicating additional courses you have taken, new GRE scores, or information about any additional experiences that may strengthen your application.

Q. How do I apply for a North Carolina Class "G" Licensure?

A. Licensure is not automatic. Students must apply for licensure upon completion of the program of study and Praxis exam. The application should be filed in the School of Graduate Studies Office, 122 Gibbs Hall, and a \$55 application fee is required by the N.C. State Department of Public Instruction.

Q. How do I apply for financial aid?

A. See the guidelines for financing graduate education on relevant pages of this Bulletin. For further information, call the Office of Financial Aid at (336) 334-7973.

Q. How do I verify my status as a state resident?

A. Residence classification for tuition purposes is set forth by law in North Carolina as follows:

To qualify as a resident for tuition purposes, a person must have established legal residence (domicile) in North Carolina and maintained that legal residence for at least 12 months immediately prior to his or her classification as a resident for tuition purposes. The controlling North Carolina statute also sets forth statutory definitions, rules and special provisions for determining resident status for tuition purposes. These provisions include special rules regarding persons who are married or who are within identified subclasses of minors. Under the statute, Indochina refugees may qualify for special considerations; certain other aliens also may qualify for resident tuition status. University regulations concerning the classification of students by residence, for purposes of applicable tuition differentials, are set forth in detail in A Manual to Assist the Public Higher Education Institutions of North Carolina in the Matter of Student Residence Classification for Tuition Purposes. Each student is responsible for knowing the contents of that manual, which is the controlling administrative statement of policy on this subject. Copies of the manual are available on request in the Office of Admissions at A & T State University for the purpose of student inspection.

Q. Do I have to take the GRE?

A. Check with your department of interest for specific requirements.

Q. Do I have to submit a TOEFL score?

A. Applicants whose primary language is not English must submit TOEFL scores of 550 or better on the paper-based test, or 213 or better on the computer-based test.

Q. What if I have additional questions?

A. Questions not answered here may be directed to our e-mail address at gradsch@ncat.edu, or answered by phone at (336) 334-7920, or 334-7921.

Establishing N.C. Resident Status

Under N.C. law, legal residence means more than simply living in the state. To be classified as an in-state student for tuition purposes, one must maintain a domicile -- or permanent home of infinite duration -- for a minimum of 12 months immediately prior to enrollment.

Individuals seeking to become N.C residents also must:

- Perform certain residentiary acts, such as
getting a driver's license
registering a motor vehicle
registering to vote
filing an N.C. income tax return at the appropriate time
- Clearly demonstrate that they are financially independent of parents or guardians (if the parents or guardians are non-N.C. residents), and demonstrate a visible means of support.

For more information about establishing N.C. residency, visit the Graduate School Web Site:

<http://www.ncat.edu/~gradsch>

1995

School of Technology
received \$2.3 million grant
for Center for Electronics
Manufacturing.

Campus Life

As a graduate student, the classroom, the lab and the library are destined to become the environments that define your campus life. Yet, graduate students are also members of the larger A&T community, and a number of University organizations and activities offer unique opportunities to participate in and contribute to the campus culture. They include:

- Academic and departmental organizations, such as the Graduate Student Association, the Graduate Engineering Student Alliance (GESA), and the organization for graduate students in social work.
- Special interest groups
- Clubs and civic organizations
- Campus ministries

1996

A&T received \$3.5 million from the U.S. Air Force Office to establish a FAST CENTER for environmental waste, remediation, fate and transport of hazardous materials.

The University provides a number of services of interest and assistance to graduate students:

The Office of University Housing and Residential Life

is a resource for graduate students seeking living accommodations both on and off campus. On campus, the University maintains eleven residence halls for women and three for men. Space for graduate students is limited, thus a request for dormitory housing accommodation should be directed to the Dean of Students at least sixty days before the expected date of registration. For more information, call (336) 334-7708. Online apartment locating services, such as www.ncapts@greensboro.com, www.reloinfo.com, and www.apartmentbluebook.com, can be good starting-point resources for information on off-campus housing.

Parking Services: All faculty, staff, resident and commuter students are eligible to house vehicles on campus and to park in designated areas. At the start of each semester, all vehicles owned and/or operated on campus by faculty, staff and students are registered as an integral part

of the University's academic registration.

Parking permits are available in the Parking Services Office, 1308 Salem Street, between 7:30 a.m. and 5 p.m. weekdays. For more information, call (336) 334-7980.

University Dining Services include the University Dining Hall, where students who reside on campus are required to have meals; the Commons, located in the F. A. Williams

Cafeteria, and the Snack Bar in the Student Union.

The Sebastian Student Health Center is located on Nocho Street on West Campus. The center, open seven days a week, offers services for emergency treatment and limited consultation with staff physicians for acute conditions. Students pay a small fee for the use of those services. For hours of operation and more information, call (336) 334-7880.



The University

Bookstore is located in Brown Hall, at the corner of Bluford and Laurel Streets. Bookstore hours are 8 a.m. to 5 p.m. weekdays.

Recreation: Students, faculty and staff have the opportunity to use the facilities of the Corbett and Moore Gymnasiums, athletic fields and all other recreational facilities of the University. Organized recreational opportunities including swimming, tennis, basketball, skating, volleyball, and dancing are sponsored through the Intramural Activities Office. A small fee may be required for some activities. For more information, call the Memorial Union at (336) 334-7571.

The Memorial Union is a 45,000 square-foot facility located on the North Campus of the University. This building serves as the headquarters for several campus operations, including: the Student Government Association, the Student Union Advisory Board, the Office of Student Activities, the Commuter Student Center, the Aggie Escort Service, the Campus/Community Volunteer Connections, and the Campus Information Center. Additionally, the Memorial Union offers several meeting rooms, lounges, a banquet/ballroom, conference/guest quarters, ATM banking services, a beauty salon, a barber shop, a Sweet Shoppe, a snack bar/restaurant, and a games room area (with billiards, ping pong, videos and bowling).

Through the Student Union Advisory Board, the Memorial Union offers a variety of campus programming, including: an annual movie series, lectures, forums, games, tournaments, plays, concerts, festivals, coffeehouses, socials, balls, and numerous opportunities for student leadership training.

The Office of Career

Services, in 101 Murphy Hall, provides a wide range of programs, services and resources designed to aid students in early career explorations, and also offers career assistance to University alumni. Some of the services offered by the OCS may be accessed via the Internet, and therefore provide students with continuous and worldwide access. This system allows students and alumni access to online registration

and interview scheduling (with immediate confirmation), along with opportunities to research companies and view current employment opportunities. The University's Career Awareness Program, one of the largest in North Carolina, attracts hundreds of Fortune 500 corporate managers, federal and state agency personnel and public school district recruiters.

The office in 101 Murphy Hall provides six computer terminals from which students can register, update their resumes and request interviews; computer laboratories are also available campus-wide. For more information, visit Career Services on the Web at www.career.serv.ncat.edu, or call (336) 334-7755.





North Carolina A&T ranks near top of national magazine survey as one of the nation's best colleges for African-Americans.

The top 10 colleges for African Americans are:

1. Spelman College
Atlanta, GA
2. Morehouse College
Atlanta, GA
3. Florida A&M University
Tallahassee, FL
4. Clark Atlanta University
Atlanta, GA
5. Howard University
Washington, DC
6. Xavier University
New Orleans
7. Hampton University
Hampton, VA
8. Tuskegee University
Tuskegee, AL
9. North Carolina A&T
State University
Greensboro, NC
10. Stanford University
Palo Alto, CA

The Office of Minority Affairs was created in order to assist minority (non African-American) students at the University in the development and accomplishment of their educational goals. Housed in the Counseling Services Office, Minority Student Affairs is open from 8:00 a.m. to 5:00 p.m. weekdays and is staffed by a Coordinator/Counselor. Minority students make up approximately 12% of the student population at North Carolina A&T; there are currently about 850 such students enrolled at the University.

Under the Board of Governors' General Minority Presence Grant Program, non African-American students may be eligible for special financial assistance if they are residents of North Carolina, enrolled for at least three hours of degree-credit work, and demonstrate financial need.

The Office of Disability Support Services, in Suite 005, Murphy Hall, ensures ready access to all academic programs, services and activities to any person with a disability matriculating at the University. The office handles all information and services for persons with disabilities. For more information, call (336) 334-7765.

Counseling Services, located in 108 Murphy Hall, offers individual and group personal counseling, academic and career counseling, graduate school information, a graduate student internship training laboratory, and administration of the Graduate Record Examinations, National Teacher Examination, Graduate Management Admission Test, Veterinary College Admissions Test and other similar examinations. Telephone: (336) 334-7727. ■

1997

A&T received \$5 million from the National Science Foundation to establish a Center for Advanced Materials and Smart Structure.

The Visual and Performing Arts at A&T



The Mattye Reed African Heritage Center

The University's Mattye Reed African Heritage Center has one of the nation's largest collections of recognized African and Caribbean artifacts, valued at more than \$4 million.

A&T's Richard B. Harrison Players

The University's Richard B. Harrison Players, a nationally acclaimed theater company, recently received another mark of distinction: The company won first place in the Kennedy Center/American College Theater Festival, and performed at the Washington,

DC, center in April 1999. The A&T company's production of "David Richmond" – a play inspired by the life of one of four A&T freshman who started the national sit-in movement – was deemed the best of 80 full-length plays performed at regional festivals around the nation. The first-place award was the second such honor for the Harrison Players, who also were winners in the 1983 Kennedy Center/American College Theater Festival competition.

workshops, lectures and professional theatrical productions. ■



1998

A&T granted its first Ph.D. degrees in Electrical and Mechanical Engineering. A&T granted its first Master's Degree in Physics. A&T ranked the No.1 producer of minorities with degrees in science, mathematics, engineering and technology.

Lyceum Series

The University's Lyceum Series is designed to introduce students to professional artists and speakers through



Downtown Greensboro, NC

A&T and the Larger Community



Since its inception as a land-grant university in 1891, North Carolina A&T has advanced a rich tradition of leadership and achievement year after year. From its academic heritage to the spirited expression of its school pride, A&T inspires as it celebrates the value of the attainment of knowledge, and the worth of applying that knowledge.

The University's contributions to its surrounding community, the entire Greensboro-Piedmont Triad area and the

state are many, and the great impact of A&T's various outreach programs and services can be seen from the region's farms to its inner-city neighborhoods, from its schools to its businesses and industries. For example, A&T specialists working through the University's local cooperative extension offices directly reach more than 24,000 local farmers every month. Programs such as the University's Community Economic and Skills Development Project serve low-income communities.

One of many examples of the University's diverse educational outreach is the Summer Institute for the Advancement of Gender Equity in High Technology Programs. The program, offered by the School of Technology, encourages girls in grades 10-12 to consider careers in technology. And the University's work with the East Market Street Development Corporation is just one of the myriad ways in which it seeks to improve the Greensboro area's economic landscape.

As a land-grant institution with a history of cooperative extension service programs, North Carolina A&T has a long tradition of combining service to communities across the state with exceptional research and development programs.



1999

Dr. James C. Renick elected as the ninth chancellor of North Carolina A&T State University.



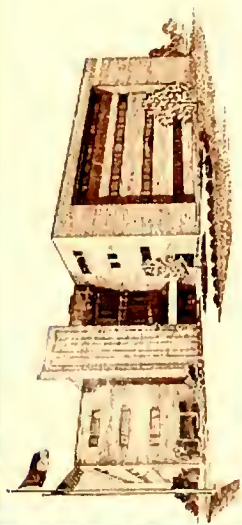
Encompassing over 188 acres at the center of North Carolina's Piedmont, the A&T campus is just nine blocks from downtown Greensboro. Well-known for its quality of life, the Greensboro-Piedmont Triad area is characterized by a mix of industry with schools and universities, contributing to its economic and cultural diversity. The area is an intellectual center, with a total of seven colleges within close

range – all offering a vast array of programs in the arts and current affairs, as well as lectures, athletic, cultural and social activities.

The city of Greensboro attracts major sporting events and entertainment to the Greensboro Coliseum. The region's Piedmont Triad International Airport, plus two interstate highways, facilitate easy access from all directions.

Additionally, Greensboro's centralized location – in the heart of the North Carolina Piedmont – is ideally situated for visits to both the state's majestic mountains and pristine beaches.

For more information on Greensboro and the Triad area, go online to <http://www.greensboronc.org/visitor.html>



School of Graduate Studies
North Carolina A&T State University
122 Gibbs Hall
Greensboro, NC 27411